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IS: 3233 - 1965

*Indian Standard*

GLOSSARY OF TERMS FOR SAFETY AND  
RELIEF VALVES AND THEIR PARTS

( Third Reprint APRIL 1989 )

UDC 621.646.4

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BUREAU OF INDIAN STANDARDS  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

# Indian Standard

## GLOSSARY OF TERMS FOR SAFETY AND RELIEF VALVES AND THEIR PARTS

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# *Indian Standard*

## GLOSSARY OF TERMS FOR SAFETY AND RELIEF VALVES AND THEIR PARTS

### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 22 June 1965, after the draft finalized by the Chemical Engineering Sectional Committee had been approved by the Mechanical Engineering Division Council.

**0.2** Safety valves and relief valves are common equipment with most pressure plants and are used to ensure that the safe working pressure in the plant is not exceeded.

**0.3** This glossary has been prepared for the guidance of the manufacturers and the users to assist them in the correct interpretation of the common terms used in safety valve and relief valve industry.

**0.4** A three digit number has been assigned to each term in this glossary. The first digit represents the number of the section under which the term comes and the last two digits represent the serial number of the term.

**0.5** Figures are given after the definitions ( *see* P 18-23 ) solely for the purpose of identifying the various parts of the different types of valves indicated and it is not the intention that any feature or component shown in any one illustration should be confined to the particular type of valve. The names of parts are given in the Key to Fig. 1 to 5 ( *see* P 24 and 25 ) which show the reference number used in the figures.

**0.6** An alphabetical index has been provided for easy location of terms, each entry of which consists of a term and its corresponding reference number ( *see* 0.4 ).

**0.7** In preparation of this standard considerable assistance has been derived from B.S. 2591: Part 2: 1956 'Glossary for valves and valve parts (for fluids), safety valves and relief valves' issued by the British Standards Institution.

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### 1. SCOPE

**1.1** This standard defines the types of, and the parts for, safety valves and relief valves.

## 1. TERMINOLOGY

## SECTION 1: SAFETY VALVES

<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
101	<b>Safety Valve</b>	A valve which automatically discharges fluid to atmosphere or into another closed system so as to prevent a pre-determined safe pressure being exceeded in the system from where the fluid is discharged.
TYPE OF SAFETY VALVE		
102	<b>Ordinary Safety Valve</b>	A valve in which the valve head lifts automatically at least $D/24$ , where $D$ = bore of valve seat.
		These valves may be:
	a) <i>Direct Spring Loaded</i>	In which the load is applied directly to the valve head by a compression spring.
	b) <i>Direct Weight Loaded</i>	In which the load is applied directly to the valve head by a weight.
	c) <i>Lever and Spring Loaded</i>	In which the load is applied to the valve head by a spring acting through a lever and fulcrum.
	d) <i>Lever and Weight Loaded</i>	In which the load is applied to the valve head by a weight acting through a lever and fulcrum.
	e) <i>'Ramsbottom' Valve</i>	In which the load is applied to two coupled valve heads by a tension spring.
103	<b>High Lift Safety Valve</b>	A safety valve in which the valve head lifts automatically at least $D/12$ , where $D$ = bore of valve seat.



<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
104	<b>Full Lift Safety Valve</b>	A safety valve in which the valve head lifts automatically a distance giving, when the valve head is fully lifted, a discharge area round the edge of the valve seat equal to the area through the seat orifice after deducting the area of guides or other obstructions.
105	<b>Pilot-Operated Safety Valve</b>	A safety valve having a 'full bore' property ensuring maximum discharge capacity with the additional feature of relay operation of the safety valve by initial release of associated pilot or control valve.
106	<b>Torsion Bar Safety Valve</b>	A safety valve in which the pressure load is applied by a torsion bar spring.
107	<b>Electrically-Assisted Safety Valve</b>	A safety valve in which electric power is used to ease the safety valve or its associated pilot (or control) valve or both.

**DIRECT SPRING LOADED SAFETY VALVE**  
(See Fig. 1, 1A and 1B on P 18 and 19)

108	<b>Body</b>	The main part of the valve in which the flow of fluid is controlled.
	a) <i>Body End Port</i>	The inlet or outlet opening at the end of the valve body.
	b) <i>Body End (Inlet)</i>	That part of the body which connects the valve to the source of pressure.
	c) <i>Body End (Outlet)</i>	That part of the body which connects the valve to the exhaust pipe.
	d) <i>Body Spring Pipe Flange</i>	The flange on the body of a valve with an enclosed spring (Fig. 1) to which the spring pipe is connected.

<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
e)	<i>Body End Neck (Inlet)</i>	That part of the body end (inlet) and the main portion of the body.
f)	<i>Body End Neck (Outlet)</i>	That part of the body between the body end (outlet) and the main portion of the body.
g)	<i>Body/Spring Pipe Neck</i>	That part of the body of a valve with an enclosed spring (Fig. 1) between the body/spring pipe flange and the main portion of the body.
h)	<i>Body Seat</i>	A machined seat with which the valve head face makes contact when the valve is closed. When the body seat is formed in the body, a valve is described as having an 'integral seat'. When the body seat is formed on the body seat ring, a valve is described as having a 'renewable seat'.
j)	<i>Drain Boss</i>	A boss formed on the exterior of the body to provide sufficient metal to permit a tapped connection to drain the outlet side of the valve body.
k)	<i>Body/Cover Flange</i>	The flange on the body of a valve with an open spring (Fig. 1B), to which the cover is connected.
m)	<i>Body/Cover Neck</i>	That part of the body of a valve with an open spring (Fig. 1B), between the body/cover flange and the main portion of the body.
109	<b>Body Components</b>	Those parts which are associated, but not integral with the body.
a)	<i>Body Seat Ring</i>	That part, separate from and secured in the body on which the body seat is machined.
b)	<i>Seat Retaining Ring</i>	The component which locks the body seat ring in position.

<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
	c) <i>Seat Retaining Ring Fastening</i>	The stud and nut, or set screw, which secures the retaining ring to the body.
110	<b>Spring Pipe</b>	That part of the valve, attached to the body which encloses the loading spring.
	a) <i>Spring Pipe/Body Flange</i>	The flange of the spring pipe to which the body is connected.
	b) <i>Spring Pipe/Cover Flange</i>	The flange on the spring pipe to which the cover is connected.
111	<b>Spring Pipe Components</b>	Those parts which are associated, but not integral with the spring pipe.
	a) <i>Spring Pipe Bush</i>	A bush in the spring pipe to guide the spindle.
	b) <i>Spring Pipe Bolting</i>	Comprises bolts, stud bolts, studs, set screws and nuts used for the body/spring pipe connection and spring pipe/cover connection.
112	<b>Spindle</b>	That component through which the spring load is transmitted to the valve head.
113	<b>Spring</b>	The loading medium of the valve.
	a) <i>Spring Plate</i>	A plate fitted at each end of the spring.
	b) <i>Spring Retainer</i>	The component which retains the spring in the body.
114	<b>Cover</b>	<p>i) <i>Valve with enclosed spring</i> (Fig. 1) — The component which covers the top of the spring pipe and houses the load adjusting components.</p> <p>ii) <i>Valve with open spring</i> (Fig. 1B) — The component which closes the body aperture through which access is obtained to the internal parts of the valve and which houses the cover bush.</p>

<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
	a) <i>Cover Bush</i>	<p>i) <i>Valve with enclosed spring</i> (Fig. 1) — An internally threaded bush in the cover with which the adjusting screw engages.</p> <p>ii) <i>Valve with open spring</i> (Fig. 1B) — A bush in the cover to guide the spindle.</p>
	b) <i>Cover Flange</i>	<p>i) <i>Valve with enclosed spring</i> (Fig. 1) — The flange on the cover to which the spring pipe/cover flange is connected.</p> <p>ii) <i>Valve with open spring</i> (Fig. 1B) — The flange on the cover to which the body/cover flange is connected.</p>
	c) <i>Cover Bolting</i>	Comprises bolts, stud bolts, studs, set screws and nuts used for the body/cover connection.
115	<b>Adjusting Screw</b>	The component by which the load on the spring is adjusted.
116	<b>Ferrule</b>	A ring, which may be in two halves, inserted between the adjusting screw and the cover to prevent overloading.
117	<b>Easing Lever</b>	A lever by which the valve head may be manually eased off its seat.
118	<b>Spindle Housing Cap</b>	A cap which houses the top of the spindle and the adjusting screw.
	<i>Cap Cotter</i>	A cotter which passes through the housing cap and the spindle and which may be pad-locked in position.
119	<b>Valve Head</b>	The closing component of the valve on which the valve head face is formed.
	a) <i>Valve Head Face</i>	A machined face which makes contact with the body seat when the valve is closed.

<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
	b) <i>Valve Head Pin</i>	The component which connects the valve head to the spindle.
	c) <i>Valve Head Guide Wings</i>	That part of the valve head which, when in the form of wings, guides the valve head to the body seat.
120	<b>Bridge</b>	The part connected to the cover by pillars and in which the adjusting screw engages.
	a) <i>Pillars</i>	Distance pieces connecting the bridge to the cover.
	b) <i>Pillar Nuts</i>	Nuts used to secure the bridge to the pillars.
<p style="text-align: center;">DIRECT WEIGHT LOADED SAFETY VALVE (See Fig. 2 on P 20)</p>		
121	<b>Body</b>	The main part of the valve in which the flow of fluid is controlled.
	a) <i>Body End Port</i>	The inlet opening at the end of the valve body.
	b) <i>Body End (Inlet)</i>	That part of the body which connects the valve to the source of pressure.
	c) <i>Body End Neck</i>	That part of the body between the body end (inlet) and the main portion of the body.
	d) <i>Body Seat</i>	A machined seat with which the valve head face makes contact when the valve is closed. When the body seat is formed in the body, a valve is described as having an 'integral seat'. When the body seat is formed on the body seat ring a valve is described as having a 'renewable seat'.
122	<b>Body Components</b>	Those parts which are associated, but not integral with the body.
	a) <i>Body Seat Ring</i>	That part, separate from and secured in the body, on which the body seat is machined.

<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
	b) <i>Seat Retaining Ring</i>	The component which locks the body seat ring in position.
	c) <i>Seat Retaining Ring Fastening</i>	Stud and nut, or set screw, which secures the retaining ring to the body.
	d) <i>Stop Stud</i>	The component which restricts the travel of the cover.
123	<b>Cover</b>	That component to which the valve head and weight casing are secured, thus transmitting the load to the valve head.
	a) <i>Cover Flange</i>	The flange on the cover to which the weight casing/cover flange is connected.
	b) <i>Cap Nut</i>	The component securing the valve head to the cover.
124	<b>Weight Casing</b>	That component, attached to the cover, which forms part of the load and carries the loading weights.
	a) <i>Weight Casing Bolting</i>	Comprises bolts and nuts used for the cover/weight casing connection.
	b) <i>Weight Casing/Cover Flange</i>	The flange on the weight casing to which the cover flange is connected.
125	<b>Weights</b>	The loading medium of the valve.
126	<b>Dishplate</b>	The receptacle attached to the valve body for the connection of condensate.
127	<b>Valve Head</b>	The closing component of the valve on which the valve head face is formed.
	<i>Valve Head Face</i>	A machined face which makes contact with the body seat when the valve is closed.

<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
<b>LEVER AND WEIGHT LOADED SAFETY VALVE</b> (See Fig. 3 on P 21)		
128	<b>Body</b>	The main part of the valve in which the flow of fluid is controlled.
	a) <i>Body End Port</i>	The inlet or outlet opening at the end of the valve body.
	b) <i>Body End (Inlet)</i>	That part of the body which connects the valve to the source of pressure.
	c) <i>Body End (Outlet)</i>	That part of the body which connects the valve to the exhaust pipe.
	d) <i>Body/Cover Flange</i>	The flange on the body to which the cover is connected.
	e) <i>Body End Neck (Inlet)</i>	That part of the body between the body end (inlet) and the main portion of the body.
	f) <i>Body End Neck (Outlet)</i>	That part of the body between the body end (outlet) and the main portion of the body.
	g) <i>Body/Cover Neck</i>	That part of the body between the body/cover flange and the main portion of the body.
	h) <i>Body Seat</i>	A machined seat with which the valve head face makes contact when the valve is closed. When the body seat is formed in the body, a valve is described as having an 'integral seat'. When the body seat is formed on the body seat ring, a valve is described as having a 'renewable seat'.
	j) <i>Drain Boss</i>	A boss formed on the exterior of the body to provide sufficient metal to permit a tapped connection to drain the outlet side of the valve body.
129	<b>Body Components</b>	Those parts which are associated, but not integral with the body.
	<i>Body Seat Ring</i>	That part, separate from and secured in the body, on which the body seat is machined.

<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
130	<b>Cover</b>	That part which closes the body aperture through which access is obtained to the internal parts of the valve.
	<i>Cover Flange</i>	The flange which connects the cover to the body/cover flange.
131	<b>Cover Components</b>	Those parts which are associated, but not integral, with the cover.
	a) <i>Cover Bush</i>	A bush in the cover to guide the spindle.
	b) <i>Cover Bolting</i>	Comprises bolts, stud bolts, studs, set screws and nuts used for the body/cover connection.
132	<b>Spindle</b>	That component through which the load is transmitted to the valve head.
	<i>Spindle/Lever Link</i>	The component attached to the spindle which keeps the spindle in position relative to the lever.
133	<b>Loading Lever</b>	That component which transmits the load to the spindle.
134	<b>Fulcrum Fork</b>	The component which carries the fulcrum pin.
	a) <i>Fulcrum Pin</i>	The pin about which the lever moves.
	b) <i>Fulcrum Fork Locking Nut</i>	The nut which locks the fulcrum fork in position.
135	<b>Cheese Weight</b>	The loading medium of the valve.
136	<b>Balance Weight</b>	The weight which balances all the moving components, excluding the cheese weight.
137	<b>Valve Head</b>	The closing component of the valve on which the valve head face is formed.
	a) <i>Valve Head Face</i>	A machined face which makes contact with the body seat when the valve is closed.



<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
b)	<i>Valve Head Pin</i>	The component which connects the valve head to the spindle.
c)	<i>Valve Head Guide Wings</i>	That part of the valve head which, when in the form of wings, guides the valve head to the body seat.

LEVER AND SPRING LOADED SAFETY VALVE  
(See Fig. 4 on P 22)

138	<b>Body</b>	The main part of the valve in which the flow of fluid is controlled.
a)	<i>Body End Port</i>	The inlet or outlet opening at the end of the valve body.
b)	<i>Body End (Inlet)</i>	That part of the body which connects the valve to the source of pressure.
c)	<i>Body End (Outlet)</i>	That part of the body which connects the valve to the exhaust pipe.
d)	<i>Body/Cover Flange</i>	The flange on the body to which the cover is connected.
e)	<i>Body End Neck (Inlet)</i>	That part of the body between the body end (inlet) and the main portion of the body.
f)	<i>Body End Neck (Outlet)</i>	That part of the body between the body end (outlet) and the main portion of the body.
g)	<i>Body/Cover Neck</i>	That part of the body between the body/cover flange and the main portion of the body.
h)	<i>Body Seat</i>	A machined seat with which the valve head face makes contact when the valve is closed. When the body seat is formed in the body, a valve is described as having an 'integral seat'. When the body is formed on the body seat ring, a valve is described as having a 'renewable seat'.

<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
	j) <i>Drain Boss</i>	A boss formed on the exterior of the body to provide sufficient metal to permit a tapped connection to drain the outlet side of the valve body.
139	<b>Body Components</b>	Those parts which are associated, but not integral, with the body.
	a) <i>Body Seat Ring</i>	That part, separate from and secured in the body, on which the body seat is machined.
	b) <i>Body Seat Ring Fastening</i>	Stud and nut, or set screw, which secures the body seat ring to the body.
140	<b>Cover</b>	That part which closes the body aperture through which access is obtained to the internal parts of the valve.
	<i>Cover Flange</i>	The flange which connects the cover to the body/cover flange.
141	<b>Cover Components</b>	Those parts which are associated, but not integral, with the cover.
	a) <i>Cover Bush</i>	A bush in the cover to guide the spindle.
	b) <i>Cover Bolting</i>	Comprises bolts, stud bolts, studs, set screws and nuts used for the body/cover connection.
142	<b>Spindle</b>	That component through which the load is transmitted to the valve head.
143	<b>Loading and Easing Lever</b>	The lever to which the spring is attached by means of which the load is applied to the valve head and by which the valve head may be manually eased off its seat.
144	<b>Fulcrum Fork</b>	The component which carries the fulcrum pin.
	<i>Fulcrum Pin</i>	The pin about which the lever moves.

<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
145	<b>Lever Limiting Guide</b>	The guide in which the lever works and which limits its travel.
146	<b>Spring Loading Bolt</b>	The bolt which attaches the spring to the body.
147	<b>Ferrule</b>	The ring inserted between the collar of the spring loading bolt and the body to prevent over-loading.
148	<b>Spring</b>	The loading medium of the valve.
	a) <i>Spring Retaining Components</i>	Comprises nut, pins, and washers.
	b) <i>Spring Bracket</i>	A bracket on the valve body forming a support for the spring.
149	<b>Valve Head</b>	The closing component of the valve on which the valve head face is formed.
	a) <i>Valve Head Face</i>	A machine face which makes contact with the body seat when the valve is closed.
	b) <i>Valve Head Pin</i>	The component which connects the valve head to the spindle.
	c) <i>Valve Head Guide Wings</i>	That part of the valve head which, when in the form of wings, guides the valve head to the body seat.

**RAMSBOTTOM TYPE SAFETY VALVE**  
(See Fig. 5 on P 23)

150	<b>Body</b>	The main part of the valve in which the flow of fluid is controlled.
	a) <i>Body End Port</i>	The inlet opening at the end of the valve body.
	b) <i>Body End (Inlet)</i>	That part of the body which connects the valve to the source of pressure.

<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
	c) <i>Body End (Outlet)</i>	Those parts of the body to which the body seat rings are secure or on which the body seats are formed.
	d) <i>Body End Neck</i>	That part of the body between the body end (inlet) and the main portion of the body.
	e) <i>Body Seat</i>	A machined seat with which the valve head face makes contact when the valve is closed. When the body seat is formed in the body, a valve is described as having an 'integral seat'. When the body seat is formed on the body seat ring, a valve is described as having a 'renewable seat'.
151	<b>Body Components</b> <i>Body Seat Ring</i>	Those parts which are associated but not integral, with the body. That part, separate from and secured in the body, on which the body seat is machined.
152	<b>Spring</b> <i>Spring Retaining Components</i>	The loading medium of the valve. Comprises nut, pins and washer.
153	<b>Spring Loading Bolt</b>	The bolt which attaches the spring to the body.
154	<b>Ferrule</b>	The ring inserted between the collar of the loading bolt and the body to prevent overloading.
155	<b>Limiting Link</b>	The component attached to the spring loading bolt and to the loading and easing lever to limit the travel of the latter.
156	<b>Loading and Easing Lever</b>	The lever to which the spring is attached by means of which the load is applied to the valve head and by which the valve head may be manually eased off its seat.

<i>Ref No.</i>	<i>Term</i>	<i>Definition</i>
157	<b>Valve Head</b>	The closing component of the valve on which the valve head face is formed.
	a) <i>Valve Head Face</i>	A machined face which makes contact with the body seat when the valve is closed.
	b) <i>Valve Head Guide Wings</i>	That part of the valve head which, when in the form of wings, guides the valve head to the body seat.

## SECTION 2: RELIEF VALVES

201	<b>Relief Valve</b>	A valve which automatically discharges fluid to relieve pressure. It is generally related to pipeline applications and non-compressible fluids. Immediate full flow discharge is not needed since a small flow reduces pressure.
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NOTE — Since the basic parts of relief valves are the same as those of ordinary safety valves, a separate glossary is not necessary and reference should, therefore, be made to Section 1 of this standard for these parts.

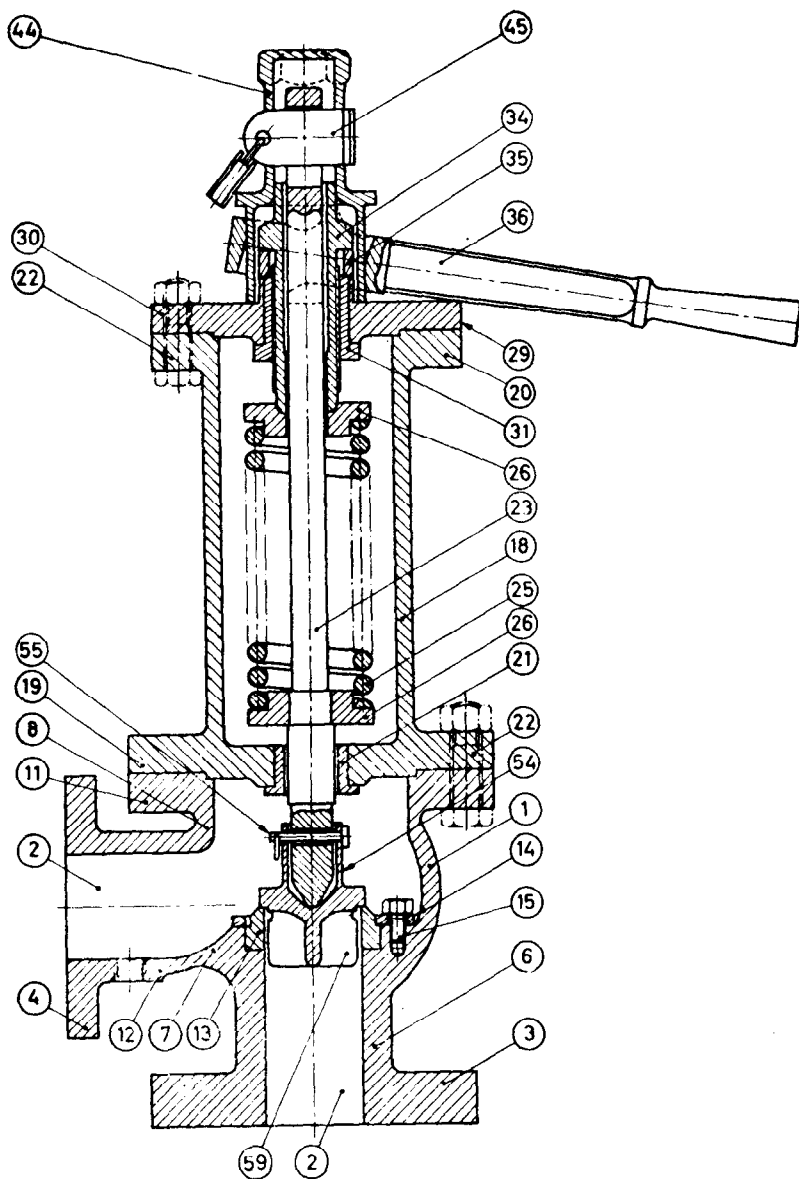


FIG. 1 DIRECT SPRING LOADED, WITH EASING LEVER, ORDINARY SAFETY VALVE

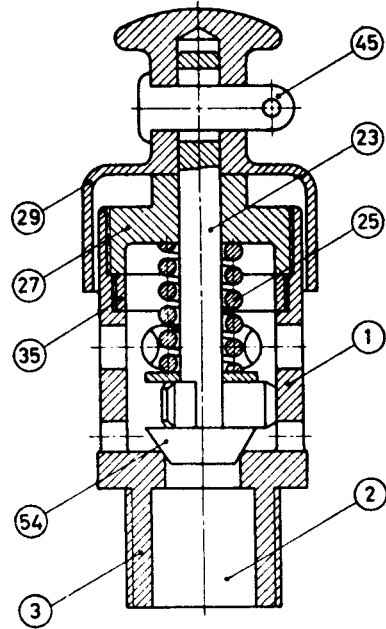


FIG. 1A DIRECT SPRING LOADED,  
WITHOUT EASING LEVER, ORDINARY  
SAFETY VALVE

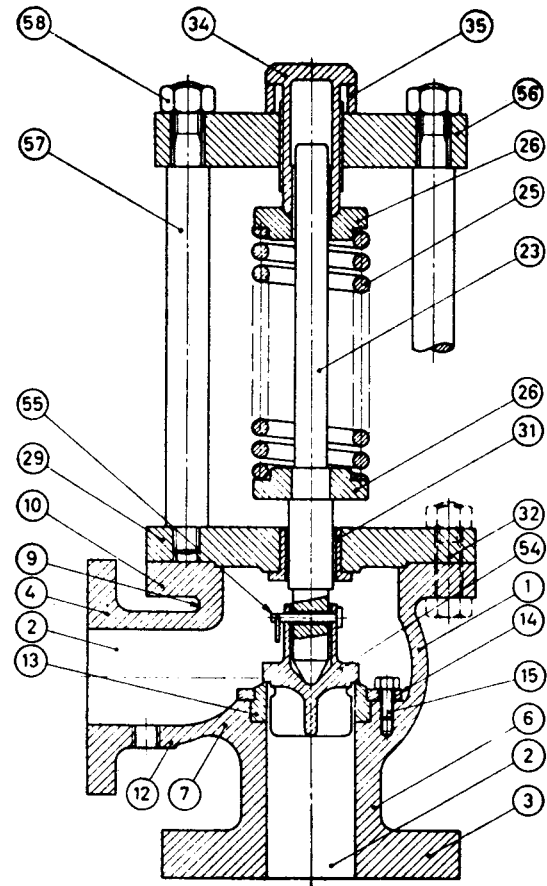


FIG. 1B DIRECT SPRING LOADED, OPEN SPRING,  
WITHOUT EASING LEVER, ORDINARY SAFETY VALVE

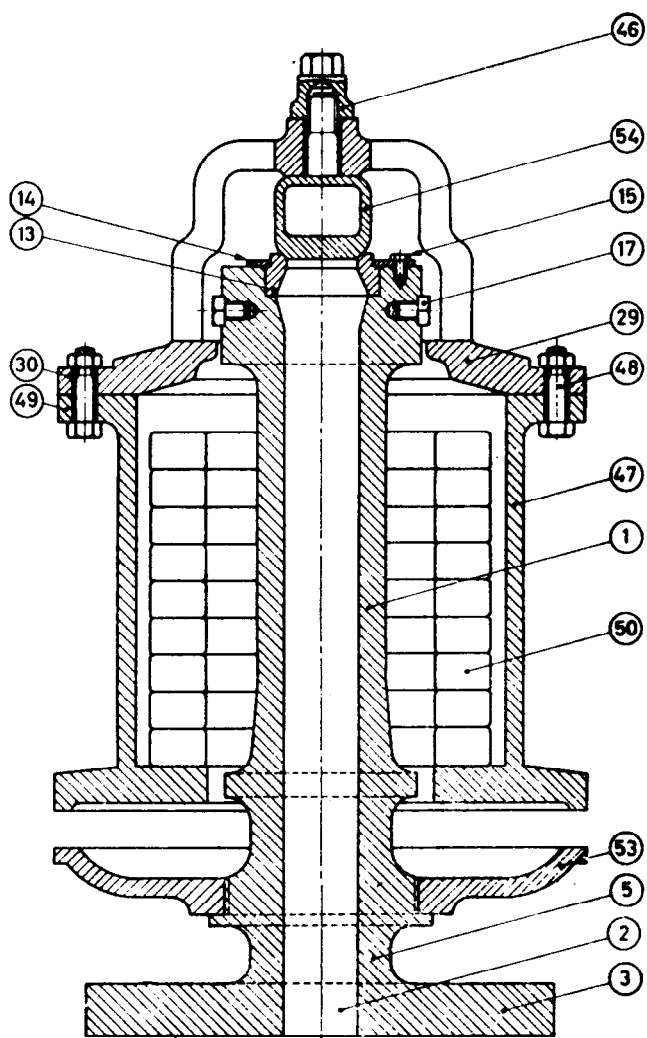


FIG. 2 DIRECT WEIGHT LOADED ORDINARY SAFETY VALVE



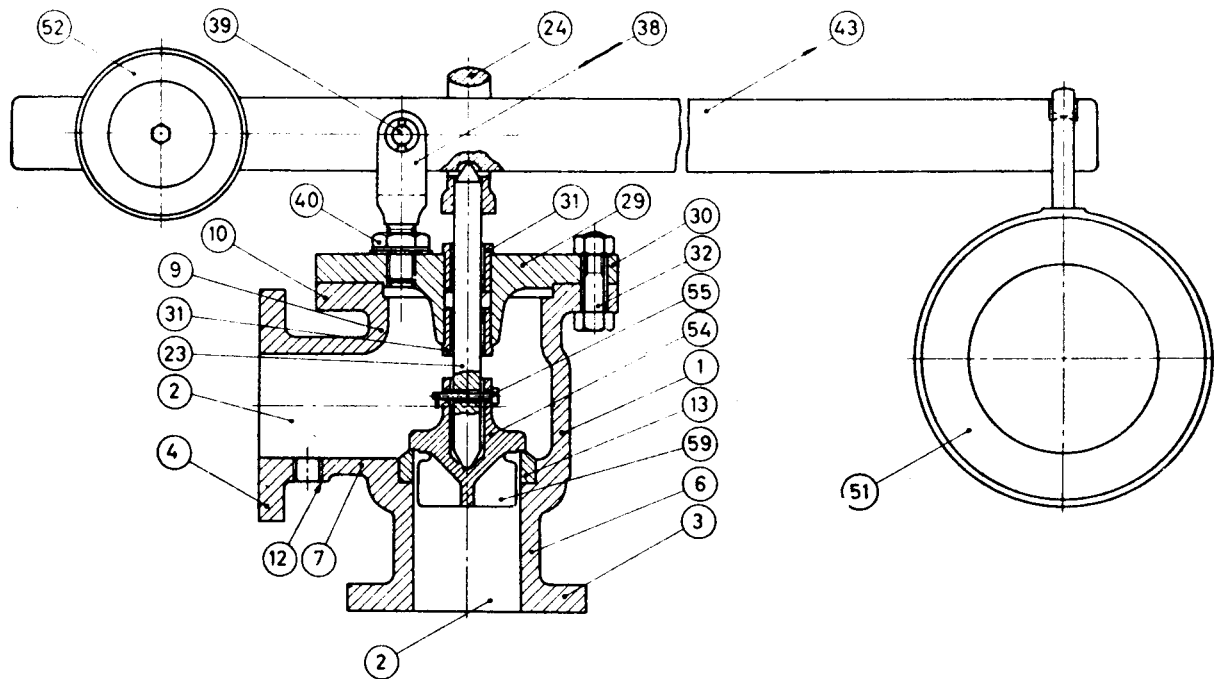


FIG. 3 LEVER AND WEIGHT LOADED ORDINARY SAFETY VALVE

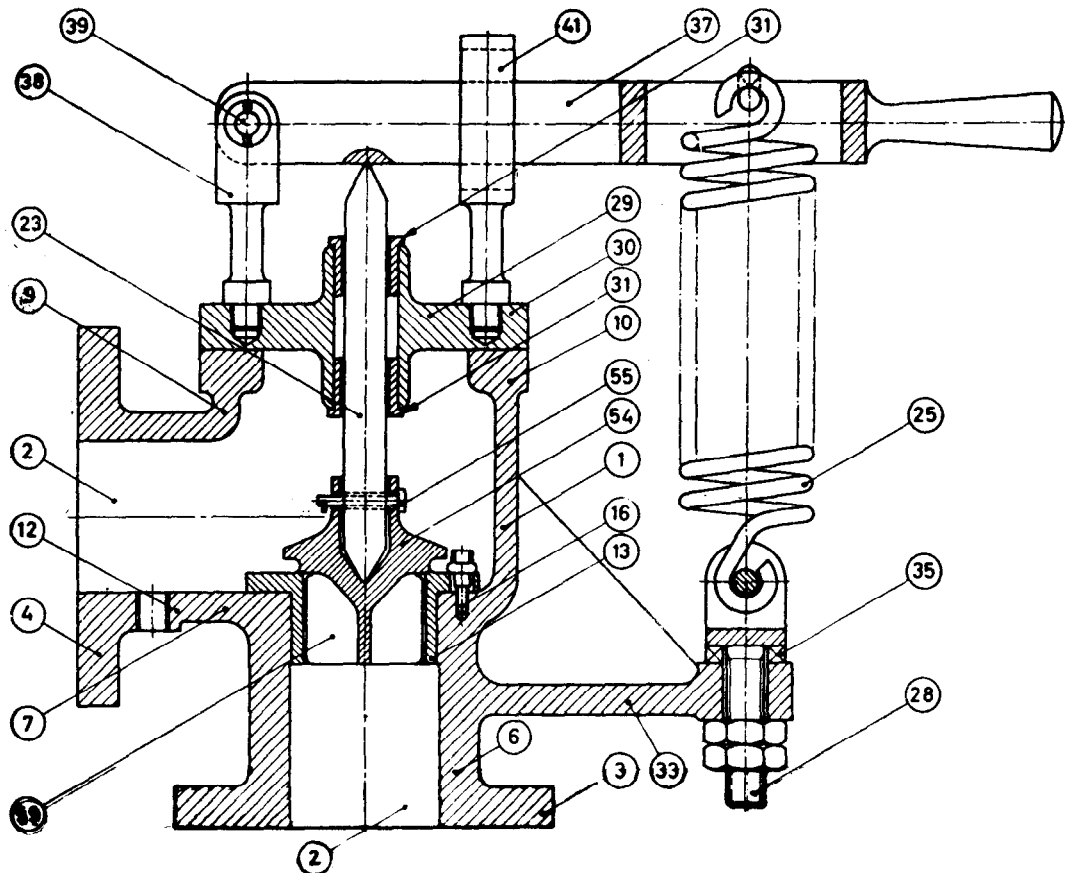


FIG. 4 LEVER AND SPRING LOADED ORDINARY SAFETY VALVE

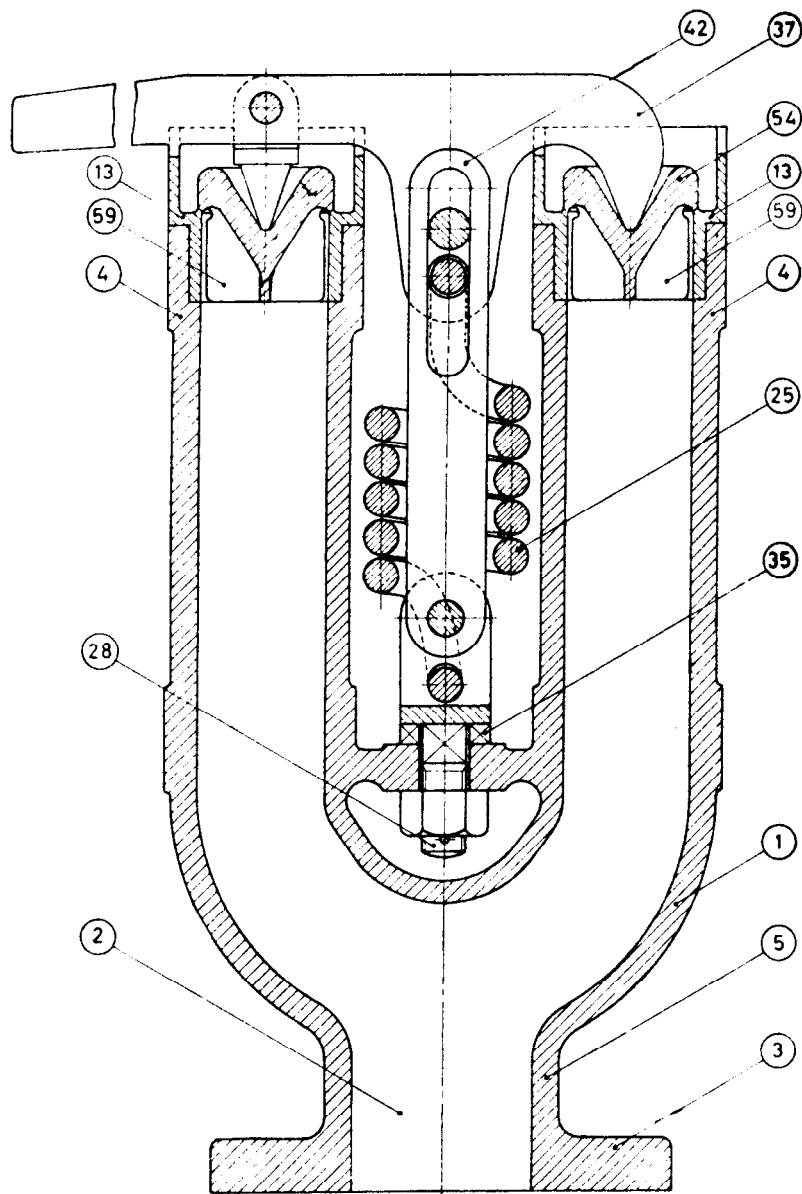


FIG. 5 RAMSBOTTOM TYPE ORDINARY SAFETY VALVE

**KEY TO FIG. 1 TO 5**  
**ARRANGED IN ORDER OF PART REFERENCES**

PART REF	NAME OF PART	REF NO. OF TERM	SEE FIG. NO.
1.	Body	108, 121, 128, 138, 150	1, 1A, 1B, 2, 3 4, 5
2.	Body end port	108 a, 121 a, 128 a, 138 a, 150 a	1, 1A, 1B, 2, 3, 4, 5
3.	Body end (inlet)	108 b, 121 b, 128 b, 138 b, 150 b	1, 1A, 1B, 2, 3, 4, 5
4.	Body end (outlet)	108 c, 128 c, 138 c, 150 c	1, 1B, 3, 4, 5
5.	Body end neck	121 c, 150 d	2, 5
6.	Body end neck (inlet)	108 e, 128 e, 138 e	1, 1B, 3, 4
7.	Body end neck (outlet)	108 f, 128 f, 138 f	1, 1B, 3, 4
8.	Body/spring pipe neck	108 g	1
9.	Body/cover neck	108 m, 128 g, 138 g	1B, 3, 4
10.	Body/cover flange	108 k, 128 d, 138 d	1B, 3, 4
11.	Body/spring pipe flange	108 d	1
12.	Drain boss	108 j, 128 j, 138 j	1, 1B, 3, 4
13.	Body seat ring	109 a, 122 a, 129 a, 139 a, 151 a	1, 1B, 2, 3, 4, 5
14.	Seat retaining ring	109 b, 122 b	1, 1B, 2
15.	Seat retaining ring fasten- ing	109 c, 122 c	1, 1B, 2
16.	Body seat ring fastening	139 b	4
17.	Stop stud	122 d	2
18.	Spring pipe	110	1
19.	Spring pipe/body flange	110 a	1
20.	Spring pipe/cover flange	110 b	1
21.	Spring pipe bush	111 a	1
22.	Spring pipe bolting	111 b	1
23.	Spindle	112, 132, 142	1, 1A, 1B, 3, 4
24.	Spindle/lever link	132 a	3
25.	Spring	113, 148, 152	1, 1A, 1B, 4, 5
26.	Spring plate	113 a	1, 1B
27.	Spring retainer	113 b	1A
28.	Spring loading bolt	146, 153	4, 5
29.	Cover	114, 123, 130, 140	1, 1A, 1B, 2, 3, 4
30.	Cover flange	114 b, 123 a, 130 a, 140 a	1, 2, 3, 4
31.	Cover bush	114 a, 131 a, 141 a	1, 1B, 3, 4
32.	Cover bolting	131 b	1B, 3
33.	Spring bracket	148 b	4
34.	Adjusting screw	115	1, 1B
35.	Ferrule	116, 147, 154	1, 1A, 1B, 4, 5

PART REF	NAME OF PART	REF NO. OF TERM	SEE FIG. NO.
36.	Easing lever	117	1
37.	Loading and easing lever	143, 156	4, 5
38.	Fulcrum fork	134, 144	3, 4
39.	Fulcrum pin	134 a, 144 a	3, 4
40.	Fulcrum fork locking nut	134 b	3
41.	Lever Limiting guide	145	4
42.	Limiting Link	155	5
43.	Loading lever	133	3
44.	Spindle housing cap	118	1
45.	Cap cotter	118 a	1, 1A
46.	Cap nut	123 b	2
47.	Weight casing	124	2
48.	Weight casing bolting	124 a	2
49.	Weight casing/cover flange	124 b	2
50.	Weights	125	2
51.	Cheeseweight	135	3
52.	Balance weight	136	3
53.	Dishplate	126	2
54.	Valve head	119, 127, 137, 149, 157	1, 1A, 1B, 2, 3, 4, 5
55.	Valve head pin	119 b, 137 b, 149 b,	1, 1B, 3, 4
56.	Bridge	120	1B
57.	Pillars	120 a	1B
58.	Pillar nuts	120 b	1B
59.	Valve head guide wings	119 c, 137 c, 149 c, 157 b	1, 3, 4, 5

## INDEX

NOTE — The index numbers are the reference numbers of the terms.

<b>A</b>		Cover components	131, 141
Adjusting screw	115	Cover flange	114(b), 123(a) 130(a), 140(a)
<b>B</b>		<b>D</b>	
Balance weight	136	Direct spring loaded ordinary safety valve	102(a)
Body	108, 121, 128, 138, 150	Direct weight loaded ordinary safety valve	102(b)
Body components	109, 122, 129, 139, 151	Dishplate	126
Body/cover flange	108(k), 128(d), 138(d)	Drain boss	108(j), 128(j), 138(j)
Body/cover neck	108(m), 128(g), 138(g)	<b>E</b>	
Body end (inlet)	108(b), 121(b), 128(b), 138(b), 150(b)	Easing lever	117
Body end neck	121(c), 150(d),	Electrically-assisted safety valve	107
Body end neck (inlet)	108(e), 128(e), 138(e)	<b>F</b>	
Body end neck (outlet)	108(f), 128(f), 138(f)	Ferrule	116, 147, 154
Body end (outlet)	108(c), 128(c), 138(c), 150(c)	Fulcrum fork	134, 144
Body end port	108(a), 121(a), 128(a), 138(a), 150(a)	Fulcrum fork locking nut	134(b)
Body seat	108(h), 121(d), 128(h), 138(h), 150(e)	Fulcrum pin	134(a), 144(a)
Body seat ring	109(a), 122(a), 129(a), 139(a), 151(a)	Full lift safety valve	104
Body seat ring fastening	139(b)	<b>H</b>	
Body/spring pipe flange	108(d)	High lift safety valve	103
Body/spring pipe neck	108(g)	<b>L</b>	
Bridge	120	Lever and spring loaded ordinary safety valve	102(c)
<b>C</b>		Lever and weight loaded ordinary safety valve	102(d)
Cap cotter	118(a)	Lever limiting guide	145
Cap nut	123(b)	Limiting link	155
Cheeseweight	135	Loading and easing lever	143, 156
Cover	114, 123, 130, 140	Loading lever	133
Cover bolting	114(c), 131(b), 141(b)	<b>O</b>	
Cover bush	114(a), 131(a), 141(a)	Ordinary safety valve	102
		Direct spring loaded	102(a)
		Direct weight loaded	102(b)
		Lever and spring loaded	102(c)
		Lever and weight loaded	102(d)

**P**

Pillar nuts	120(b)
Pillars	120(a)
Pilot-operated safety valve	105

**R**

Ramsbottom valve	102(c)
Relief valve	201

**S**

Safety valve	101
Safety valve, Electrically-assisted	107
Safety valve, Full lift	104
Safety valve, High lift	103
Safety valve, Ordinary	102
Safety valve, Ordinary Direct spring loaded	102(a)
Safety valve, Ordinary Direct weight loaded	102(b)
Safety valve, Ordinary Lever and spring loaded	102(c)
Safety valve, Ordinary Lever and weight loaded	102(d)
Safety valve, Pilot operated	105
Safety valve, Torsion bar	106
Seat retaining ring	109(b), 122(b)
Seat retaining ring fastening	109(c), 122(c)
Spindle	112, 132, 142
Spindle housing cap	118
Spindle/lever link	132(a)

**Spring**

	<b>113, 118, 132</b>
Spring bracket	148(b)
Spring loading bolt	146, 153
Spring pipe	110
Spring pipe/body flange	110(a)
Spring pipe belting	111(b)
Spring pipe bush	111(a)
Spring pipe/cover flange	110(b)
Spring pipe components	111
Spring plate	113(a)
Spring retainer	113(b)
Spring retaining components	148(a), 152(a)
Stop stud	122(d)

**T**

Torsion bar safety valve	106
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**V**

Valve head	119, 127, 137, 149, 157
Valve head face	119(a), 127(a), 137(a), 149(a), 157(a)
Valve head guide wings	119(c), 137(c), 149(c), 157(b)
Valve head pin	119(b), 137(b), 149(b)

**W**

Weight casing	124
Weight casing bolting	124(a)
Weight casing/cover flange	124(b)
Weights	125

*(Continued from page 2)*

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